		NTSB ID: NYC99LA200		Aircraft Registration Number: N193GE	
		Occurrence Date: 08/13/1999		Most Critical Injury: Minor	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place HILLSBOROUGH	State NH	Zip Code 03244	Local Time 1311	Time Zone EDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Cessna		Model/Series 208		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On August 13, 1999, at 1311 eastern daylight time, a Cessna 208, N193GE, was destroyed during a precautionary landing near Hillsborough, New Hampshire. The certificated airline transport pilot received minor injuries. Visual meteorological conditions prevailed for the ferry flight which departed from Manchester, New Hampshire (MHT), and was destined for Denver, Colorado (DEN). The flight was operated on an instrument flight rules flight plan under 14 CFR Part 91.</p> <p>The pilot reported he flew the airplane to Bangor, Maine, on August 11, 1999, for the installation of two auxiliary fuel tanks. The installation took place on August 12 and 13, and the pilot flew the airplane to Manchester, Hampshire (MHT) where the auxiliary fuel tanks were filled. The Federal Aviation Administration (FAA), Portland Flight Standards District Office had issued a special flight permit for the overweight operation of the airplane.</p> <p>At MHT, the airplane was serviced with 654 gallons of Jet-A. The wing tanks were filled, and the auxiliary fuel tanks (205 gallons each) were serviced with 190 gallons each, which brought them to within 1 inch of the top. The pilot reported that the gross weight of the airplane was about 10,000 pounds.</p> <p>The takeoff and initial climb were without incident. As the airplane passed through about 800 to 900 feet, the pilot smelled turbine fuel. He stopped the climb and attempted to locate the source of the fumes. From his seat in the cockpit, he could not identify the source of the fumes. He requested radar vectors to the closest airport and initiated a descent. He then noticed about 1 inch of standing fuel on the floor of the cabin, and turned off the radios.</p> <p>During the descent, the amount of fuel in the cockpit area continued to increase, so the pilot elected to land in an open field rather than continue toward the airport. He reported that due to fuel fumes and raw fuel in the cockpit, his vision was blurred, his eyes burned, and he had difficulty breathing. He positioned the airplane for landing into the wind. On final approach, the fuel was up over his ankles and his sectional charts were floating on top of the fuel.</p> <p>After touchdown, he applied maximum reverse thrust and brakes. During the ground roll, at a speed of about 40 knots, he observed a ditch ahead of him. He had no further memory of events until he was being treated by paramedics.</p> <p>A nearby airplane observed the landing and reported that the airplane nosed over during the landing roll. After about 5 minutes, the pilot exited the airplane and crawled away. About 5 minutes later, the airplane started to burn. Medical personnel arrived about 15 minutes after the accident.</p> <p>An inspector from the FAA reported that the airplane traveled about 400 feet on the ground prior to encountering a ditch which measured about 60 feet wide and 3 feet deep. The airplane</p>					
FACTUAL REPORT - AVIATION					

National Transportation Safety Board

FACTUAL REPORT**AVIATION**

NTSB ID: NYC99LA200

Occurrence Date: 08/13/1999

Occurrence Type: Accident


Narrative (Continued)


crossed the ditch, and continued for about another 120 feet and came to rest. The nose landing gear had separated from the airplane. The airplane was consumed by fire except for the outboard wing panels and empennage.


Documents from the FAA and interviews with the pilot revealed the two tanks were mounted in the cabin laterally, and secured to the floor with tie-down straps. The takeoffs for the fuel lines were on the back side of the fuel tanks and not visible to the pilot. The two tanks fed into a common manifold, which was used to replenish the right wing fuel tank. The engine could not be fed directly from the auxiliary tanks. The pilot reported that he had not actuated the auxiliary tank system on the flight.

Examination of the supporting documents for the tank installation, furnished by the facility that performed the work, and interviews with the pilot, revealed the following; the fuel tanks were installed laterally; however, the FAA Form 337 showed the fuel tanks installed longitudinally; the instructions issued to the pilot for the use of the auxiliary tank system did not cover all contingencies, or limitations; the pilot reported that the 3 auxiliary fuel pumps used to transfer fuel from the auxiliary tanks to the right wing tank were secured to a platform. However, the platform was not secured to the airplane.

These items were discussed with the FAA Principle Maintenance Inspector (PMI) who had oversight authority for the facility that performed the auxiliary tank installation. The PMI reported that the facility has subsequently changed their procedures.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: NYC99LA200			
		Occurrence Date: 08/13/1999			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach: NONE					
VFR Approach/Landing: Precautionary Landing					
Aircraft Information					
Aircraft Manufacturer Cessna		Model/Series 208		Serial Number 20800193	
Airworthiness Certificate(s): Special Flight (Special)					
Landing Gear Type: Tricycle					
Homebuilt Aircraft? No	Number of Seats: 2	Certified Max Gross Wt.	8035 LBS	Number of Engines: 1	
Engine Type: Turbo Prop	Engine Manufacturer: P&W	Model/Series: PT6-114A	Rated Power: 600 HP		
- Aircraft Inspection Information					
Type of Last Inspection AAIP	Date of Last Inspection 06/08/1999	Time Since Last Inspection 79 Hours	Airframe Total Time 6132 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated? Yes	ELT Aided in Locating Accident Site? Yes			
Owner/Operator Information					
Registered Aircraft Owner GREYSTOKE ENGINEERING INC.		Street Address 13120 SW 63 RD AVE			
		City MIAMI	State FL	Zip Code 33156	
Operator of Aircraft RAM AERONAUTICAL		Street Address 10800 E CACTUS ROAD #9			
		City SCOTTSDALE	State AZ	Zip Code 85259	
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Ferry					
<div>FACTUAL REPORT - AVIATION</div> <div>Page 2</div>					

 National Transportation Safety Board FACTUAL REPORT AVIATION			NTSB ID: NYC99LA200																																																																																			
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First Pilot Information																																																																																						
Name On File			City On File		State On File	Date of Birth On File	Age 47																																																																															
Sex: M	Seat Occupied: Left		Principal Profession: Civilian Pilot			Certificate Number: On File																																																																																
Certificate(s): Airline Transport; Commercial																																																																																						
Airplane Rating(s): Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea																																																																																						
Rotorcraft/Glider/LTA: None																																																																																						
Instrument Rating(s): Airplane																																																																																						
Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane																																																																																						
Type Rating/Endorsement for Accident/Incident Aircraft? No					Current Biennial Flight Review?																																																																																	
Medical Cert.: Class 1		Medical Cert. Status: Valid Medical--no waivers/lim.			Date of Last Medical Exam: 06/07/1999																																																																																	
<table border="1"> <thead> <tr> <th rowspan="2">- Flight Time Matrix</th> <th rowspan="2">All A/C</th> <th rowspan="2">This Make and Model</th> <th rowspan="2">Airplane Single Engine</th> <th rowspan="2">Airplane Multi-Engine</th> <th rowspan="2">Night</th> <th colspan="2">Instrument</th> <th rowspan="2">Rotorcraft</th> <th rowspan="2">Glider</th> <th rowspan="2">Lighter Than Air</th> </tr> <tr> <th>Actual</th> <th>Simulated</th> </tr> </thead> <tbody> <tr> <td>Total Time</td> <td>10530</td> <td>3000</td> <td>7415</td> <td>3091</td> <td>667</td> <td>1166</td> <td>149</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td>10458</td> <td>3000</td> <td>7350</td> <td>2991</td> <td>650</td> <td>1000</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td>800</td> <td>100</td> <td>500</td> <td>300</td> <td>20</td> <td>100</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td>168</td> <td>123</td> <td>123</td> <td>45</td> <td>2</td> <td>11</td> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td>22</td> <td>22</td> <td>22</td> <td></td> <td></td> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Actual	Simulated	Total Time	10530	3000	7415	3091	667	1166	149				Pilot In Command(PIC)	10458	3000	7350	2991	650	1000					Instructor	800	100	500	300	20	100					Last 90 Days	168	123	123	45	2	11	1				Last 30 Days	22	22	22			4					Last 24 Hours	1	1	1							
- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument								Rotorcraft	Glider				Lighter Than Air																																																																			
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Seatbelt Used? Yes		Shoulder Harness Used? Yes			Toxicology Performed? No		Second Pilot? No																																																																															
Flight Plan/Itinerary																																																																																						
Type of Flight Plan Filed: IFR																																																																																						
Departure Point		State		Airport Identifier		Departure Time		Time Zone																																																																														
MANCHESTER		NH		MHT		1300		EDT																																																																														
Destination		State		Airport Identifier																																																																																		
DENVER		CO		DEN																																																																																		
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Type of Airspace: Class E																																																																																						
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Source of Briefing: Flight Service Station																																																																																						
Method of Briefing:																																																																																						


 National Transportation Safety Board FACTUAL REPORT AVIATION			NTSB ID: NYC99LA200		
			Occurrence Date: 08/13/1999		
			Occurrence Type: Accident		

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
MHT	1300	EDT	234 Ft. MSL	22 NM	120 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			3000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None			0 Ft. AGL	Visibility: 7 SM	Altimeter: 29.00 "Hg
Temperature: 28 °C		Dew Point: 22 °C	Wind Direction: 170		Density Altitude: Ft.
Wind Speed: 8		Gusts:	Weather Conditions at Accident Site: Visual Conditions		
Visibility (RVR): 0 Ft.		Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown		
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information					
Aircraft Damage:		Aircraft Fire:		Aircraft Explosion	
Classification:					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot			1		1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -			1		1
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	1		1

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FACTUAL REPORT - AVIATION		Page 4
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 National Transportation Safety Board FACTUAL REPORT AVIATION	NTSB ID: NYC99LA200	
	Occurrence Date: 08/13/1999	
	Occurrence Type: Accident	
Administrative Information		
Investigator-In-Charge (IIC) ROBERT L. HANCOCK		
Additional Persons Participating in This Accident/Incident Investigation: DONALD LEVESQUE FAA FSDO PORTLAND, ME		
<div>FACTUAL REPORT - AVIATION</div> <div>Page 5</div>		